

VERSION WITH MARKINGS TO SHOW CHANGES MADE  
BY AMENDMENT

1. A method for generating a compact difference result between an old executable program and a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the method comprising the steps of:

- (a) scanning the old program and for substantially each reference entry perform steps that include:
  - (i) replacing the reference of said entry by a distinct label mark, whereby a modified old program is generated;
- (b) scanning the new program and for substantially each reference entry perform steps that include:
  - (i) replacing the reference of said entry by a distinct label mark, whereby a modified new program is generated;
- (c) generating said difference result utilizing directly or indirectly at least said modified old program and modified new program.

5. A method for performing an update in an old executable program so as to generate a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the method comprising the steps of:

- (a) receiving data that includes a compact difference result; said compact difference result was generated utilizing a modified old program and a modified new program;
- (b) scanning the old program and for substantially each reference entry perform steps that include:
  - (i) replacing the reference of said entry by a distinct label mark, whereby the modified old program is generated;
- (c) reconstituting the modified new program utilizing at least said compact difference result and said modified old program; said modified new program is differed from said new program at least in that substantially each reference entry in said new program is replaced in said modified new program by a distinct label mark;

- (d) reconstituting said new program utilizing directly or indirectly at least said compact difference result and said modified new program.

8. A method for generating a compact difference result between an old executable program and a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the method comprising the steps of:

- (a) generating a modified old program utilizing at least said old program;
- (b) generating a modified new program utilizing at least said new program, said modified old program and modified new program have at least the following characteristics:
  - (i) substantially each reference in an entry in said old program that is different than corresponding entry in said new program due to delete/insert modifications that form part of the transition between said old program and new program are reflected as invariant references in the corresponding entries in said modified old and modified new programs;
- (c) generating said compact difference result utilizing at least said modified new program and modified old program.

12. A method for performing an update in an old executable program so as to generate a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the method comprising the steps of:

- (a) receiving data that includes a compact difference result; said compact difference result was generated utilizing a modified old program and a modified new program;
- (b) generating a modified old program utilizing at least said old program;
- (c) reconstituting a modified new program utilizing directly or indirectly at least said modified old program and said compact difference result; said modified old program and modified new program have at least the following characteristics:
  - (i) substantially each reference in an entry in said old program that is different than corresponding entry in said new program due to delete/inset modifications that form part of the transition between said old program and new program are reflected as invariant references in the corresponding entries in said modified old and modified new programs;
- (d) reconstituting said new program utilizing directly or indirectly at least said

compact difference result and said modified new program.

14. A system for generating a compact difference result between an old executable program and a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the system comprising a processing device capable of:

- (a) scanning the old program and for substantially each reference entry perform steps that include:
  - (i) replacing the reference of said entry by a distinct label mark, whereby a modified old program is generated;
- (b) scanning the new program and for substantially each reference entry perform steps that include:
  - (i) replacing the reference of said entry by a distinct label mark, whereby a modified new program is generated;
- (c) generating said difference result utilizing directly or indirectly at least said modified old program and modified new program.

18. A system for performing an update in an old executable program so as to generate a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the system comprising a processing device capable of:

- (a) receiving data that includes a compact difference result; said compact difference result was generated utilizing a modified old program and a modified new program;
- (b) scanning the old program and for substantially each reference entry perform steps that include:
  - (i) replacing the reference of said entry by a distinct label mark, whereby the modified old program is generated;
- (c) reconstituting the modified new program utilizing at least said compact difference result and said modified old program; said modified new program is differed from said new program at least in that substantially each reference entry in said new program is replaced in said modified new program by a distinct label mark;
- (d) reconstituting said new program utilizing directly or indirectly at least said compact difference result and said modified new program.

21. A system for generating a compact difference result between an old executable program and a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the system comprising a processing device capable of :

- (a) generating a modified old program utilizing at least said old program;
- (b) generating a modified new program utilizing at least said new program, said modified old program and modified new program have at least the following characteristics:
  - (i) substantially each reference in an entry in said old program that is different than corresponding entry in said new program due to delete/insert modifications that form part of the transition between said old program and new program are reflected as invariant references in the corresponding entries in said modified old and modified new programs;
- (c) generating said compact difference result utilizing at least said modified new program and modified old program.

25. A system for performing an update in an old executable program so as to generate a new executable program; each program including reference entries that contain reference that refer to other entries in the program; the system comprising a processing device capable of :

- (a) receiving data that includes a compact difference result; said compact difference result was generated utilizing a modified old program and a modified new program;
- (b) generating a modified old program utilizing at least said old program;
- (c) reconstituting a modified new program utilizing directly or indirectly at least said modified old program and said compact difference result; said modified old program and modified new program have at least the following characteristics:
  - (i) substantially each reference in an entry in said old program that is different than corresponding entry in said new program due to delete/inset modifications that form part of the transition between said old program and new program are reflected as invariant references in the corresponding entries in said modified old and modified new programs;
- (d) reconstituting said new program utilizing directly or indirectly at least said compact difference result and said modified new program.